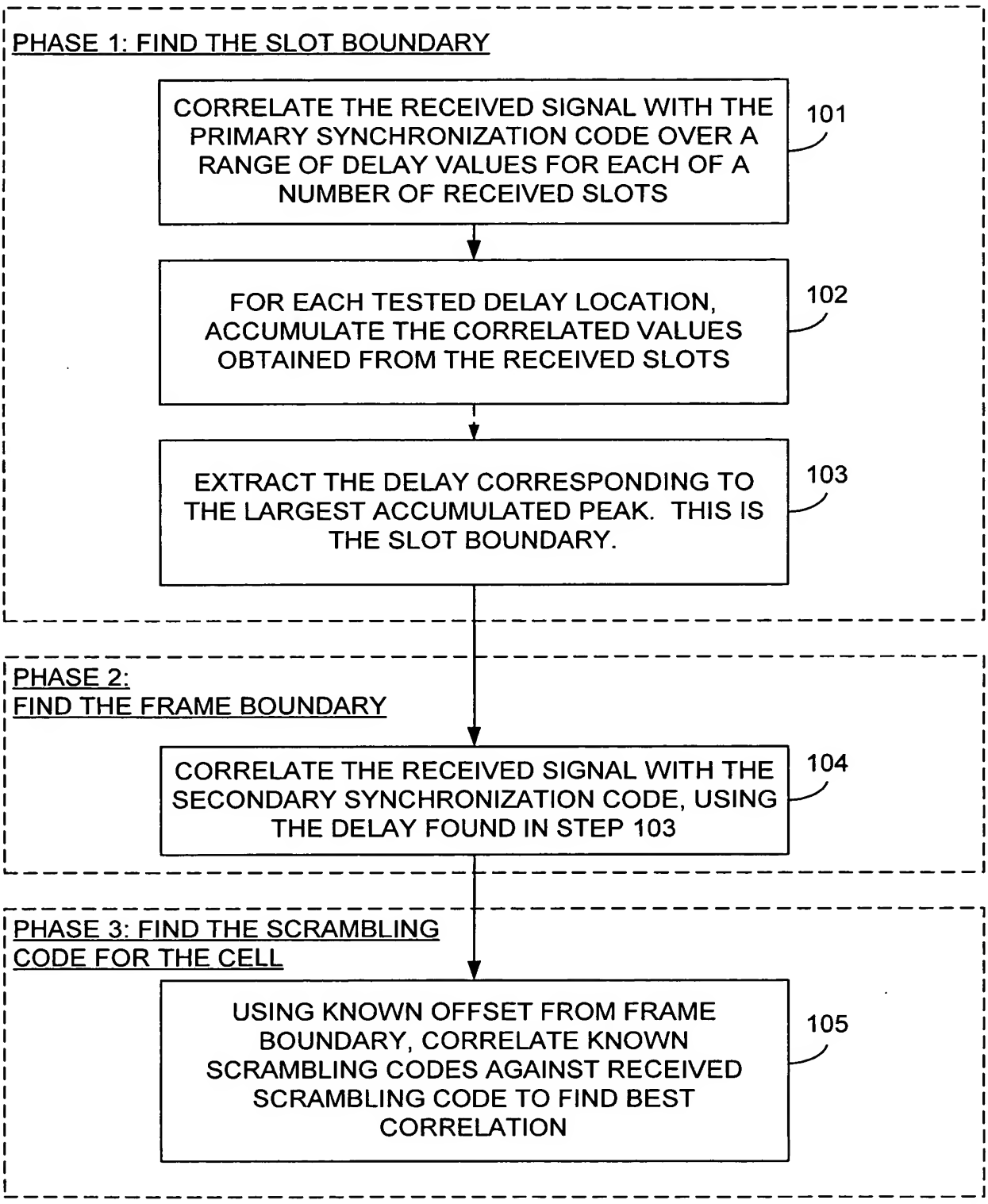

FIG. 1
(PRIOR ART)

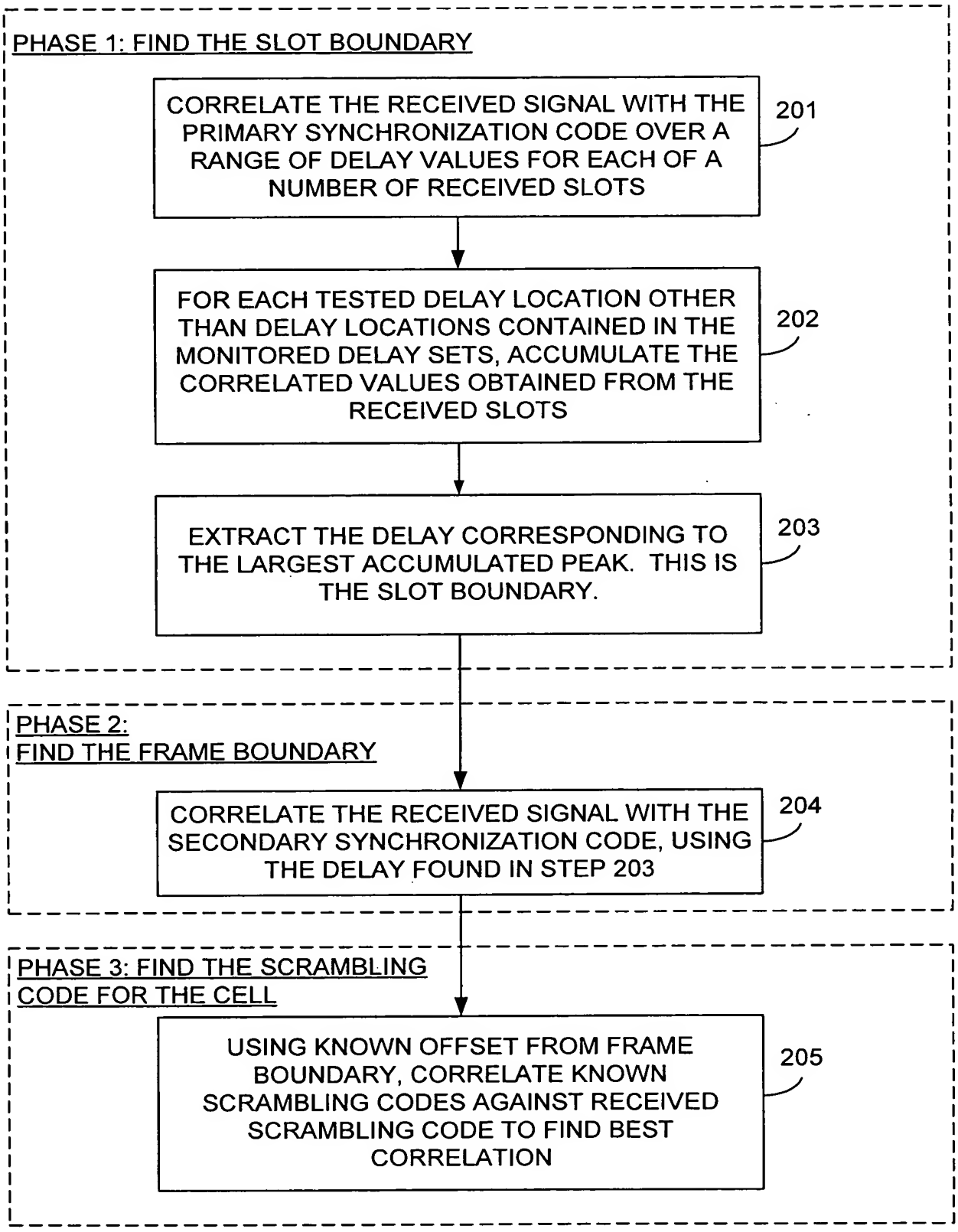
PHASE 1: FIND THE SLOT BOUNDARY
CORRELATE THE RECEIVED SIGNAL WITH THE PRIMARY SYNCHRONIZATION CODE OVER A RANGE OF DELAY VALUES FOR EACH OF A NUMBER OF RECEIVED SLOTS
201
FOR EACH TESTED DELAY LOCATION OTHER THAN DELAY LOCATIONS CONTAINED IN THE MONITORED DELAY SETS, ACCUMULATE THE CORRELATED VALUES OBTAINED FROM THE RECEIVED SLOTS
202
EXTRACT THE DELAY CORRESPONDING TO THE LARGEST ACCUMULATED PEAK. THIS IS THE SLOT BOUNDARY.
203
PHASE 2:
FIND THE FRAME BOUNDARY
CORRELATE THE RECEIVED SIGNAL WITH THE SECONDARY SYNCHRONIZATION CODE, USING THE DELAY FOUND IN STEP 203
204
PHASE 3: FIND THE SCRAMBLING CODE FOR THE CELL
USING KNOWN OFFSET FROM FRAME BOUNDARY, CORRELATE KNOWN SCRAMBLING CODES AGAINST RECEIVED SCRAMBLING CODE TO FIND BEST CORRELATION
205

FIG. 2

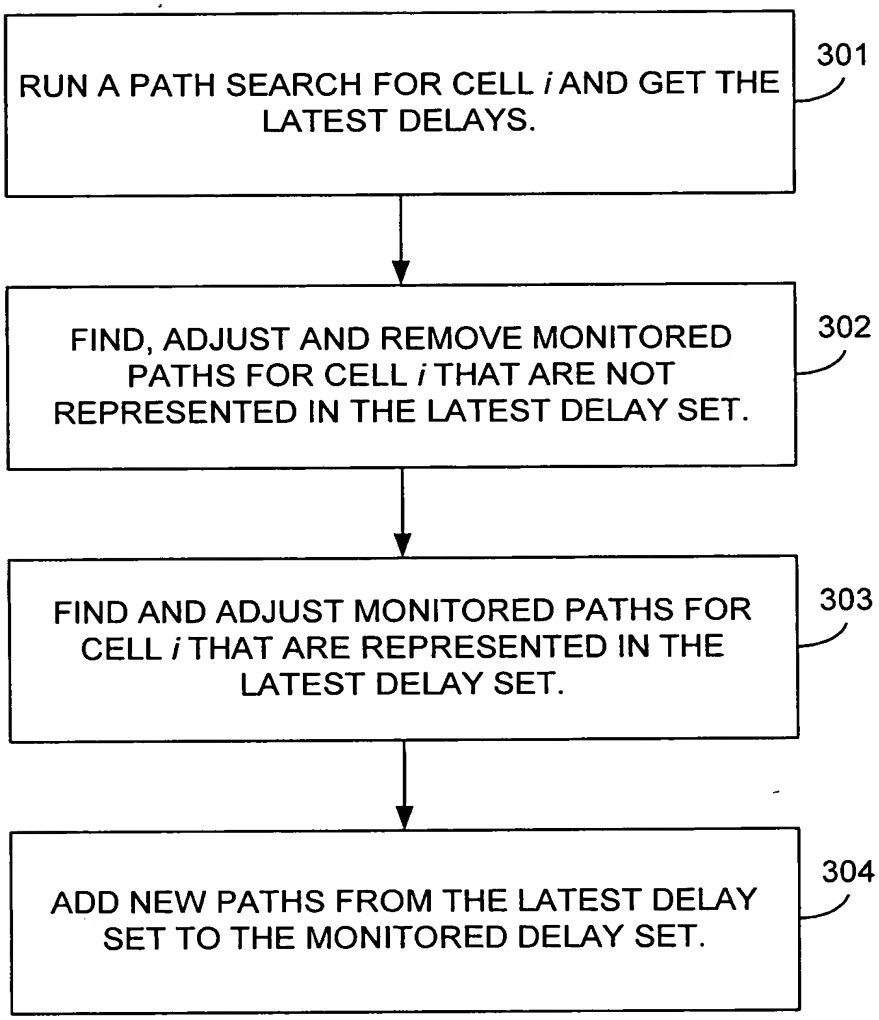
RUN A PATH SEARCH FOR CELL i AND GET THE LATEST DELAYS.
301
FIND, ADJUST AND REMOVE MONITORED PATHS FOR CELL i THAT ARE NOT REPRESENTED IN THE LATEST DELAY SET.
302
FIND AND ADJUST MONITORED PATHS FOR CELL i THAT ARE REPRESENTED IN THE LATEST DELAY SET.
303
ADD NEW PATHS FROM THE LATEST DELAY SET TO THE MONITORED DELAY SET.
304

FIG. 3

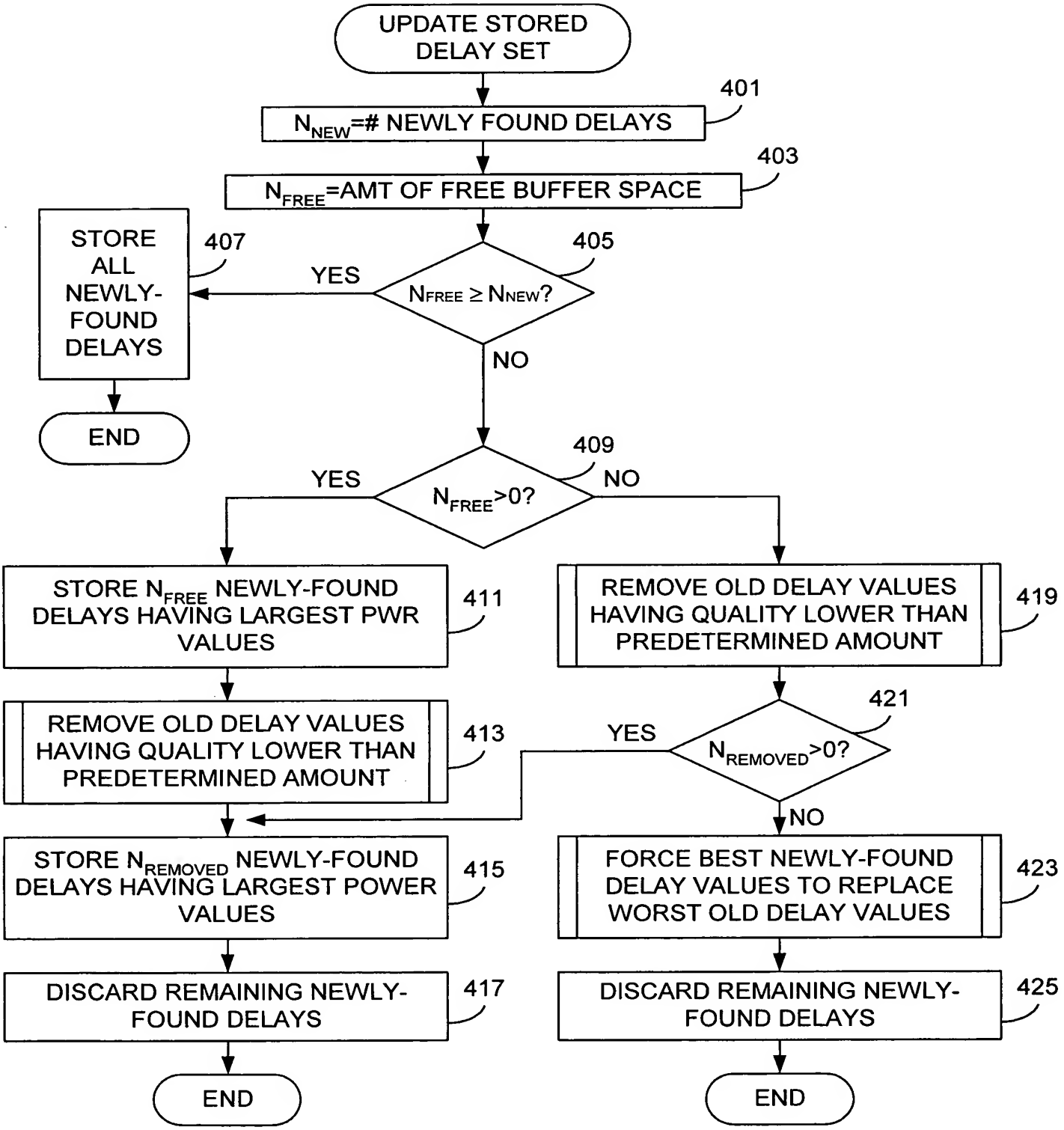
UPDATE STORED DELAY SET
401
N_{NEW}=# NEWLY FOUND DELAYS
403
N_{FREE}=AMT OF FREE BUFFER SPACE
405
$N_{FREE} \geq N_{NEW}$?
YES
407
STORE ALL NEWLY-FOUND DELAYS
END
NO
409
N_{FREE}>0?
YES
NO
411
STORE N_{FREE} NEWLY-FOUND DELAYS HAVING LARGEST PWR VALUES
413
REMOVE OLD DELAY VALUES HAVING QUALITY LOWER THAN PREDETERMINED AMOUNT
415
STORE $N_{REMOVED}$ NEWLY-FOUND DELAYS HAVING LARGEST POWER VALUES
417
DISCARD REMAINING NEWLY-FOUND DELAYS
END
419
REMOVE OLD DELAY VALUES HAVING QUALITY LOWER THAN PREDETERMINED AMOUNT
421
$N_{REMOVED}$>0?
YES
NO
423
FORCE BEST NEWLY-FOUND DELAY VALUES TO REPLACE WORST OLD DELAY VALUES
425
DISCARD REMAINING NEWLY-FOUND DELAYS
END

FIG. 4A

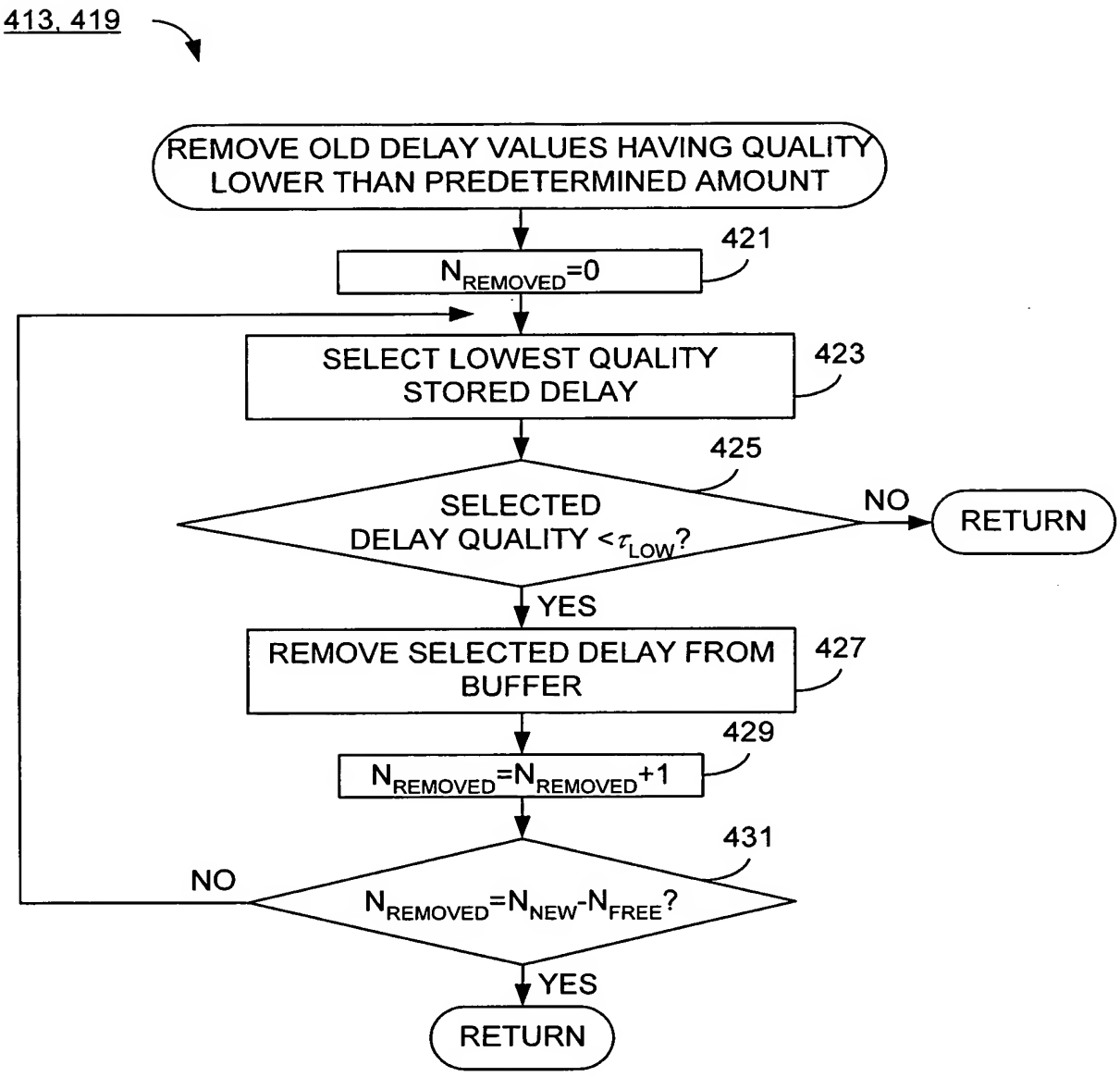
413, 419
REMOVE OLD DELAY VALUES HAVING QUALITY LOWER THAN PREDETERMINED AMOUNT
421
$N_{REMOVED}=0$
SELECT LOWEST QUALITY STORED DELAY
423
425
SELECTED DELAY QUALITY $<\tau_{LOW}$?
NO
RETURN
YES
REMOVE SELECTED DELAY FROM BUFFER
427
429
$N_{REMOVED}=N_{REMOVED}+1$
431
NO
$N_{REMOVED}=N_{NEW}-N_{FREE}$?
YES
RETURN

FIG. 4B

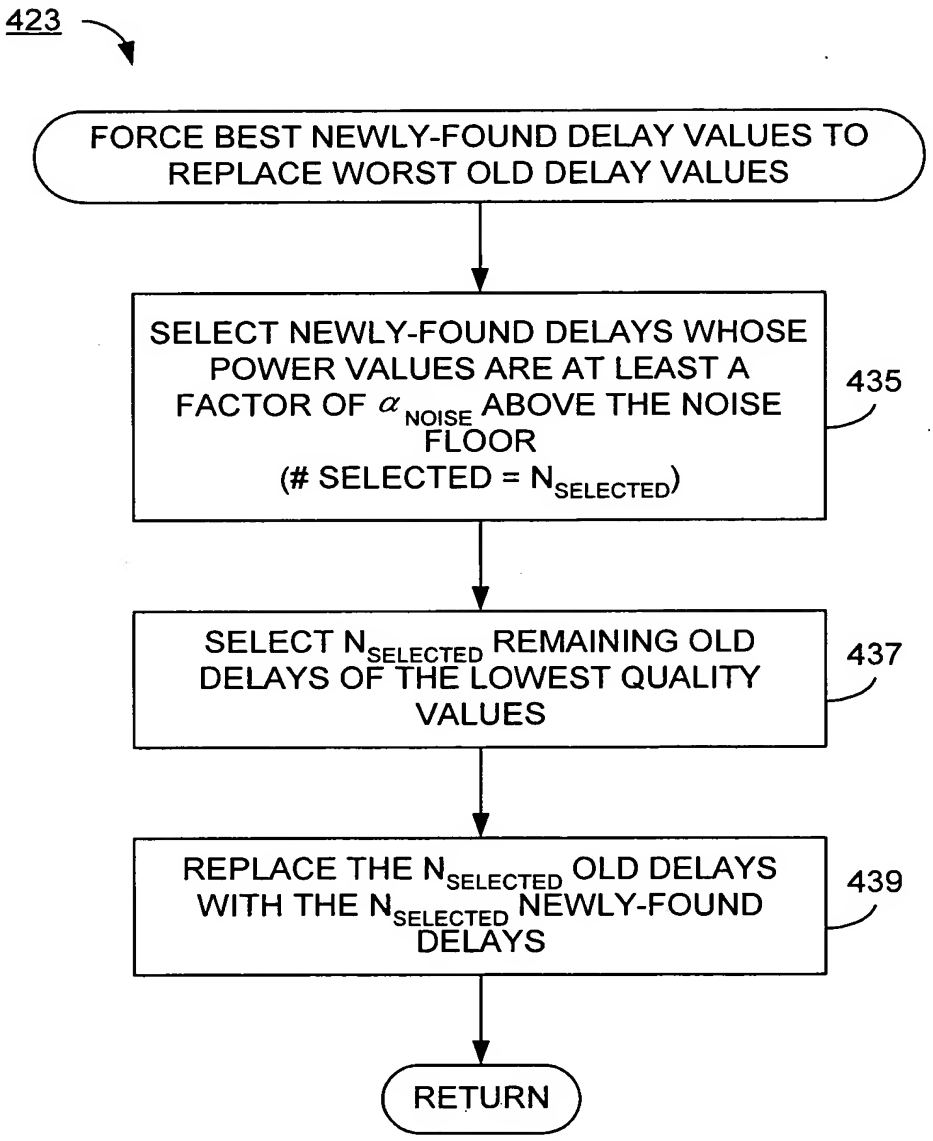
423
FORCE BEST NEWLY-FOUND DELAY VALUES TO REPLACE WORST OLD DELAY VALUES
SELECT NEWLY-FOUND DELAYS WHOSE POWER VALUES ARE AT LEAST A FACTOR OF α_{NOISE} ABOVE THE NOISE FLOOR (# SELECTED = $N_{SELECTED}$)
435
SELECT $N_{SELECTED}$ REMAINING OLD DELAYS OF THE LOWEST QUALITY VALUES
437
REPLACE THE $N_{SELECTED}$ OLD DELAYS WITH THE $N_{SELECTED}$ NEWLY-FOUND DELAYS
439
RETURN

FIG. 4C